

Amendments to the Claims

LISTING OF CLAIMS

Claims 1-20 (canceled)

21. (currently amended) A ~~pass-through~~ system for testing an electronic module having a plurality of terminal contacts comprising:

a test circuitry configured to generate and apply test signals to the module;

~~an interface~~ a board;

a plurality of test contactors on the ~~interface~~ board configured to electrically engage the terminal contacts and movable from a first position to a second position, each test contactor comprising a coiled spring ~~and having~~ a terminal portion configured to ~~penetrate electrically engage~~ a terminal contact with a spring force generated by the coiled spring; and

a flex circuit in electrical communication with the test contactors and the test circuitry.

22. (currently amended) The system of claim 21 wherein the test contactors comprise a base slidably mounted to the ~~interface~~ board.

23. (currently amended) The system of claim 21 wherein the test contactors comprise a molded plastic base slidably mounted to the ~~interface~~ board and the coiled springs are embedded in the molded plastic.

24. (currently amended) The system of claim 21 wherein the terminal portion is configured to penetrate the terminal contact.

~~module comprises an element selected from the group consisting of semiconductor memory modules, multi chip~~

~~modules, semiconductor carriers, semiconductor packages, and microprocessors.~~

25. (currently amended) A method for testing an electronic module having a plurality of terminal contacts comprising:

providing ~~an interface~~ a board comprising a plurality of contact pads in electrical communication with a test circuitry;

providing a plurality of movable test contactors on the ~~interface~~ board comprising a plurality of spring contacts configured to electrically engage the terminal contacts and the contact pads;

placing the module on the ~~interface~~ board with a zero insertion force and the terminal contacts proximate to the test contactors;

moving the test contactors to physically and electrically engage the terminal contacts and the contact pads with the spring contacts; and

applying test signals through the test contactors and the terminal contacts to the module.

26. (Original) The method of claim 25 wherein the spring contacts comprise leaf springs.

27. (Original) The method of claim 25 wherein the spring contacts comprise first leaf springs configured to electrically engage the terminal contacts and second leaf springs configured to electrically engage the contact pads.

28. (Original) The method of claim 25 wherein the spring contacts comprise beam leads.

29. (Original) The method of claim 25 wherein the spring contacts comprise coil segments.

30. (currently amended) A method for testing an electronic module having a plurality of terminal contacts comprising:

providing a test circuitry configured to generate and apply test signals to the module;

providing ~~an interface~~ a board;

providing a plurality of movable test contactors on the ~~interface~~ board comprising a plurality of coiled spring contacts configured to electrically engage the terminal contacts and the contact pads, and a flex circuit in electrical communication with the spring contacts and the test circuitry;

placing the module on the ~~interface~~ board with a zero insertion force with the terminal contacts proximate to the test contactors;

moving the test contactors to physically and electrically engage the terminal contacts with the coiled spring contacts; and

applying test signals through the test contactors and the terminal contacts to the module.

31. (currently amended) The method of claim 30 wherein the test contactors are slidably or rotatably mounted to the ~~interface~~ board.

32. (Original) The method of claim 30 wherein the spring contacts generate a force for electrically engaging the terminal contacts.

33. (Original) A method for testing an electronic module having a plurality of terminal contacts comprising:

providing a test circuitry configured to generate and apply test signals to the module;

providing ~~an interface~~ a board comprising a plurality of contact pads in electrical communication with the test circuitry;

providing a plurality of test contactors on the ~~interface~~ board comprising a movable base and a plurality of spring contacts on the base configured for movement from a first position to a second position;

placing the module on the ~~interface~~ board with the terminal contacts aligned with the test contactors with a zero insertion force;

rotating the spring contacts to electrically engage the terminal contacts and the contact pads; and

applying test signals through the spring contacts and the terminal contacts to the module.

34. (currently amended) The method of claim 33 wherein the spring contacts comprise rotatable leaf springs. [.]

35. (Original) The method of claim 33 wherein the spring contacts comprise first leaf spring portions configured to electrically engage the terminal contacts and second leaf spring portions configured to electrically engage the contact pads.

36. (Original) The method of claim 33 wherein the spring contacts comprise slidable beam leads.

37. (Original) The method of claim 33 wherein the spring contacts are configured to generate a spring force for electrically engaging the terminal contacts.

38. (Original) The method of claim 33 wherein the terminal contacts comprise planar pads.

39. (Original) The method of claim 33 wherein the module comprises an element selected from the group consisting of semiconductor memory modules, multi chip

modules, semiconductor carriers, semiconductor packages, and microprocessors.

Claims 40-46 (Canceled)

47. (currently amended) A pass through test contactor for testing an electronic module having a plurality of terminal contacts comprising:

a base movable from a first position to a second position;

a plurality of spring contacts on the base configured to electrically engage the terminal contacts and movable from the first position to the second position, each test contactor comprising a coiled spring and a terminal portion configured to ~~penetrate~~ electrically engage a terminal contact with a spring force generated by the coiled spring and with a zero insertion force on the module; and

a flex circuit in electrical communication with the spring contacts.

48. (Original) The test contactor of claim 47 wherein the base comprises molded plastic and the coiled springs are embedded in the molded plastic.

49. (Original) The test contactor of claim 47 wherein the module comprises an element selected from the group consisting of semiconductor memory modules, multi chip modules, semiconductor carriers, semiconductor packages, and microprocessors.

50. (Original) The test contactor of claim 47 further comprising an interface board comprising support members for movable mounting the base.

51. (new) The test contactor of claim 47 wherein the terminal portion is configured to penetrate the terminal contact.

52. (new) A test system for testing an electronic module having a plurality of terminal contacts comprising:

a test circuitry configured to apply test signals to the module;

a board; and

a plurality of coiled spring contacts on the board movable from a first position in which the terminal contacts can be aligned with the coiled spring contacts with a zero insertion force on the module, to a second position in which the coiled spring contacts electrically engage the terminal contacts, each coiled spring contact comprising an end portion in electrical communication with the test circuitry and a tip portion configured in the first position to be spaced from a terminal contact and in the second position to electrically engage the terminal contact.

53. (new) The system of claim 52 further comprising a flex circuit electrically connecting the coiled spring contacts to the test circuitry.

54. (new) The system of claim 52 further comprising a test handler configured to move the coiled spring contacts from the first position to the second position.

55. (new) The system of claim 52 wherein the tip portion is configured to penetrate the terminal contact.

56. (new) The system of claim 52 further comprising a movable base on the board configured to support and move the coiled spring contacts from the first position to the second position.

57. (new) A system for testing an electronic module having a plurality of terminal contacts comprising:

- a test circuitry;
- a test handler;
- a board on the test handler;

a base on the board movable by the test handler from a first position to a second position; and

a plurality of test contactors on the base in electrical communication with the test circuitry configured to electrically engage the terminal contacts, each test contactor comprising a coiled spring having a terminal portion configured to align with a terminal contact in the first position and to electrically engage the terminal contact in the second position with a spring force exerted by the coiled spring.

58. (new) The system of claim 57 further comprising a flex circuit in electrical communication with the test contactors and the test circuitry.

59. (new) The system of claim 57 wherein the terminal portion is configured to penetrate the terminal contact with the spring force.

60. (new) The system of claim 57 further comprising a drive mechanism on the test handler configured to move the base from the first position to the second position.